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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,971	05/25/2001	Jeffrey A. Kleck	7175 US	9219
7590	06/08/2005		EXAMINER	
Francis I. Gray TEKTRONIX, INC. P.O. Box 500, MS 50-LAW Beaverton, OR 97077			LUGO, DAVID B	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,971

Applicant(s)

KLECK ET AL.

Examiner

David B. Lugo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 11, 17-21 and 23-26 is/are rejected.
- 7) ☒ Claim(s) 2-10, 12-16 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 8-9, filed 2/22/05, with respect to the rejection(s) of claim(s) 1-3, 11, 17-19, 21 and 23-25 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of a newly found prior art reference.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 17-20 and 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Mesuda et al. U.S. Patent 5,563,921.

4. Regarding claims 1 and 26, Mesuda et al. disclose a jitter measurement system for a serial data stream in Figure 1 comprising means for down converting (14) the serial data stream to a low rate serial stream, and means for measuring jitter (18), where Mesuda et al. describes that the phase modulation degree of the converted output is the same as that of the target signal, and no deterioration in jitter detection sensitivity occurs (col. 5, lines 65-67), which would result in the jitter in unit intervals being the same for the high rate and the low rate streams. This is an improvement over prior art systems employing frequency division where jitter detection is deteriorated due to the frequency division ratio (col. 2, lines 42-67).

5. Regarding claim 17, the down converting means (14) comprises means for mixing (15) the serial data stream with a local oscillator signal having a frequency near the high baud to

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provide a spectrum of mixed serial data streams, and means for selecting (16) the low rate signal from the spectrum of mixed serial data streams.

6. Regarding claims 18 and 20, the mixing means (15) comprises a mixer having the serial data stream and the oscillator signal as inputs and having the spectrum of mixed serial data streams as an output.

7. Regarding claim 19, the selecting means (16) comprises a filter having the spectrum of mixed serial data streams as an input and the low rate serial stream as an output.

8. Regarding claim 23, the frequency of the oscillator signal is tunable to adjust the jitter measurement to accommodate a range of high bauds (col. 6, lines 35-43).

9. Regarding claims 24 and 25, the center frequency of the selecting means is set to the low frequency of either $f_1 - f_3$ or $f_3 - f_1$ (col. 6, lines 64-67, col. 8, lines 9-14), and is thus considered tunable to adjust the system to accommodate a range of bauds.

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mesuda et al. in view of Ishida et al. U.S. Patent 6,598,004 (previously cited) and Ellis, II et al. U.S. Patent 6,127,994 (previously cited).

Regarding claim 11, Mesuda et al. disclose a jitter measurement system as disclosed above, but does not disclose that the serial stream is digitized to produce a sampled serial stream.

However, analog to digital converters are well known in the art for digitizing a signal to enable digital processing. For example, Ishida et al. disclose a jitter measurement apparatus where the input signal is digitized in A/D converter 101 (Fig. 19).

It would have been obvious to one of ordinary skill in the art to digitize the serial data stream and process it digitally because digital circuits are smaller and less costly than analog circuits performing similar functions (see Ellis, II et al., col. 2, lines 1-2).

12. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mesuda et al. in view of Fattouche et al. U.S. Patent 6,330,452 (previously cited).

Regarding claim 21, Mesuda et al. disclose a jitter measurement system as disclosed above, but does not disclose an anti-aliasing filter for filtering the serial data stream for input to the down converting means.

Fattouche et al. disclose a pre-aliasing filter 811 that precedes down converter 804.

It would have been obvious to one of ordinary skill in the art to use a filter as disclosed by Fattouche et al. in the system of Mesuda et al. in order to remove unwanted sidebands from the signal.

Allowable Subject Matter

13. Claims 2-10, 12-16 and 22, as well as multiple dependent claims 11, 17-21 and 23-25 when depending from any one of claims 2-10, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David B. Lugo whose telephone number is 571-272-3043. The examiner can normally be reached on M-F; 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Lugo
6/3/05


KHAI TRAN
PRIMARY EXAMINER